

**Amendment and Response**

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Serial No.: 09/600,432

Confirmation No.: 3387

Filed: October 2, 2000

For: PEPTIDES WITH  $\beta 1$  INTEGRIN SUBUNIT DEPENDENT CELL ADHESION MODULATING ACTIVITY**Amendments to the Claims**

This listing of claims replaces all prior versions, and listings, of claims in the above-identified application:

6. (previously presented) A peptide of no more than about six amino acid residues, said peptide having the sequence Pro-Arg-Ala-Arg-Ile-Tyr (SEQ ID NO:24), Arg-Ala-Arg-Ile-Tyr (SEQ ID NO:25), Ala-Arg-Ile-Tyr (SEQ ID NO:26), or Arg-Ile-Tyr, wherein said peptide retains a C-terminal Ile-Tyr dipeptide sequence.
7. (canceled)
8. (currently amended) The peptide of claim [[7]] 6 wherein said peptide inhibits  $\beta 1$  integrin subunit dependent adhesion.
9. (currently amended) The peptide of claim [[7]] 8 wherein said peptide ~~modulates~~ inhibits  $\alpha 4 \beta 1$  integrin dependent adhesion.
10. (currently amended) The peptide of claim [[9]] 8 wherein said peptide inhibits [[ $\alpha 4 \beta 1$ ]]  $\alpha 5 \beta 1$  integrin dependent cell adhesion.
11. (currently amended) The peptide of claim [[10]] 9 wherein said peptide inhibits  $\alpha 4 \beta 1$  integrin dependent adhesion of Ramos cells to  $\alpha 4 \beta 1$  integrin binding fibronectin fragments.
23. (currently amended) A method for [[modulating]] inhibiting the  $\beta 1$  integrin subunit dependent adhesion of cells to a substrate, the method comprising:
  - combining a peptide of claim 6 with a suspension of said cells to form a modified cell suspension; and
  - contacting the modified cell suspension with the substrate;

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wherein the  $\beta$ 1 integrin subunit dependent adhesion of said cells to a substrate is inhibited.

24. (canceled)

25. (canceled)

26. (currently amended) The method of claim ~~[[25]]~~ 23 wherein the  $\beta$ 1 integrin is  $\alpha$ 4 $\beta$ 1.

27. (currently amended) The method of claim ~~[[24]]~~ 23 wherein the  $\beta$ 1 integrin is ~~[[ $\alpha$ 4 $\beta$ 1]]~~  
 $\alpha$ 5 $\beta$ 1.

28. (currently amended) A method of inhibiting  $\alpha$ 4 $\beta$ 1 integrin dependent adhesion of cells to integrin-binding fibronectin fragments, the method comprising:

combining a peptide of claim 6 with the cells to form a modified cell suspension; and

contacting the modified cell suspension with the integrin-binding fibronectin fragments;

wherein  $\alpha$ 4 $\beta$ 1 integrin dependent adhesion of the cells of the modified cell suspension to integrin-binding fibronectin fragments is inhibited.

29. (previously presented) A peptide consisting of the sequence Pro-Arg-Ala-Arg-Ile-Tyr (SEQ ID NO:24), Arg-Ala-Arg-Ile-Tyr (SEQ ID NO:25), Ala-Arg-Ile-Tyr (SEQ ID NO:26), or Arg-Ile-Tyr.

30. (currently amended) A peptide of no more than about ten amino acid residues, said peptide having the sequence Pro-Arg-Ala-Arg-Ile-Tyr (SEQ ID NO:24), Arg-Ala-Arg-Ile-Tyr (SEQ ID NO:25), or Ala-Arg-Ile-Tyr (SEQ ID NO:26), ~~or Arg-Ile-Tyr~~, and wherein said peptide retains a C-terminal Ile-Tyr dipeptide sequence.

31-36. (canceled)

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37. (new) The peptide of claim 29 wherein said peptide inhibits  $\beta 1$  integrin subunit dependent adhesion.
38. (new) The peptide of claim 37 wherein said peptide inhibits  $\alpha 4 \beta 1$  integrin dependent adhesion.
39. (new) The peptide of claim 37 wherein said peptide inhibits  $\alpha 5 \beta 1$  integrin dependent cell adhesion.
40. (new) The peptide of claim 38 wherein said peptide inhibits  $\alpha 4 \beta 1$  integrin dependent adhesion of Ramos cells to  $\alpha 4 \beta 1$  integrin binding fibronectin fragments.
41. (new) The peptide of claim 30 wherein said peptide inhibits  $\beta 1$  integrin subunit dependent adhesion.
42. (new) The peptide of claim 41 wherein said peptide inhibits  $\alpha 4 \beta 1$  integrin dependent adhesion.
43. (new) The peptide of claim 41 wherein said peptide inhibits  $\alpha 5 \beta 1$  integrin dependent cell adhesion.
44. (new) The peptide of claim 42 wherein said peptide inhibits  $\alpha 4 \beta 1$  integrin dependent adhesion of Ramos cells to  $\alpha 4 \beta 1$  integrin binding fibronectin fragments.
45. (new) A method for inhibiting the  $\beta 1$  integrin subunit dependent adhesion of cells to a substrate, the method comprising:

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combining a peptide of claim 29 with a suspension of said cells to form a modified cell suspension; and

contacting the modified cell suspension with the substrate;

wherein the  $\beta 1$  integrin subunit dependent adhesion of said cells to a substrate is inhibited.

46. (new) The method of claim 45 wherein the  $\beta 1$  integrin is  $\alpha 4\beta 1$ .

47. (new) The method of claim 45 wherein the  $\beta 1$  integrin is  $\alpha 5\beta 1$ .

48. (new) A method of inhibiting  $\alpha 4\beta 1$  integrin dependent adhesion of cells to integrin-binding fibronectin fragments, the method comprising:

combining a peptide of claim 29 with the cells to form a modified cell suspension; and

contacting the modified cell suspension with the integrin-binding fibronectin fragments;

wherein  $\alpha 4\beta 1$  integrin dependent adhesion of the cells of the modified cell suspension to integrin-binding fibronectin fragments is inhibited.

49. (new) A method for inhibiting the  $\beta 1$  integrin subunit dependent adhesion of cells to a substrate, the method comprising:

combining a peptide of claim 30 with a suspension of said cells to form a modified cell suspension; and

contacting the modified cell suspension with the substrate;

wherein the  $\beta 1$  integrin subunit dependent adhesion of said cells to a substrate is inhibited.

50. (new) The method of claim 49 wherein the  $\beta 1$  integrin is  $\alpha 4\beta 1$ .

51. (new) The method of claim 49 wherein the  $\beta 1$  integrin is  $\alpha 5\beta 1$ .

52. (new) A method of inhibiting  $\alpha 4\beta 1$  integrin dependent adhesion of cells to

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integrin-binding fibronectin fragments, the method comprising:

combining a peptide of claim 30 with the cells to form a modified cell suspension; and

contacting the modified cell suspension with the integrin-binding fibronectin fragments;

wherein  $\alpha 4 \beta 1$  integrin dependent adhesion of the cells of the modified cell suspension to

integrin-binding fibronectin fragments is inhibited.